

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Patent Number : 2863137

Registered Date : December 11, 1998

Publication Date : March 3, 1999

Laid-Open Number : 10-60480

Laid-Open Date : March 3, 1997

Application Number : 8-218855

Application Date : August 20, 1996

Int. Class Number : C11D 3/37, 10/02, 17/08;

JP08218855

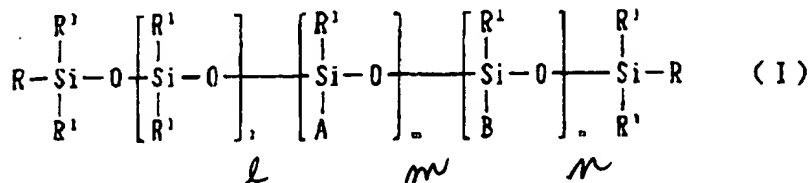
Pat # 10060480

Patentee : Kao Corp

Title: Liquid detergent composition

Claims:

1. A liquid detergent composition comprising (a) from 0.05 to 5% by weight of an amino-modified silicone (i) derivative represented by the following general formula (I) and (b) from 5 to 70% by weight of a surfactant containing from 95 to 75% by weight of the following nonionic surfactant (1) and from 5 to 15% by weight of the following nonionic surfactant (ii), wherein the weight ratio of (a):(b) is from 1 :100 to 1:5.



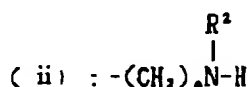
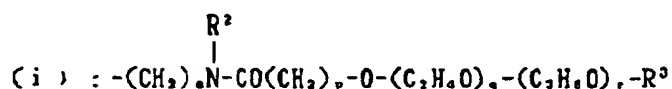
(wherein

Q is from 100 to 600, m and n are such numbers as satisfying $1:m = 100:1$ to $10:1$ and $m:n = 1:10$ to $10:1$,

R represents an alkyl group, a hydroxy group or an alkoxy group of from 1 to 4 carbon atoms,

R^1 each represents an alkyl group of from 1 to 4 carbon atoms, which may be different from each other,

A represents a group represented by the group (i) or represented by groups (i) and (ii) described below, and the ratio of (ii) in A is 50 mol% or less in the latter case,



wherein

a is from 2 to 6,

R^2 represents a hydrogen atom or an alkyl group of from 1 to 4 carbon atoms,

p is from 1 to 6,

q is from 1 to 20,

r is from 0 to 20,

R^3 represents an alkyl group of from 1 to 18 carbon atoms,

B represents $-(CH_2)_a - O - (C_2H_4O)_x - (C_3H_6O)_y - R^4$ or R^1 ,

R^4 represents an alkyl group of from 1 to 10 carbon atoms,

x is from 1 to 20, and

y is from 0 to 20.

< nonionic surfactant (1) > nonionic surfactant represented by the following general formula (i):



(wherein R_1 represents a linear or branched alkyl or alkenyl group of from 8 to 18 carbon atoms, or an alkylphenyl group of from 12 to 22 carbon atoms in total, R_2 represents an alkylene group of from 2 to 4 carbon atoms, R_3 represents hydrogen, a methyl or ethyl group, n is an addition mol number of alkylene oxide added so that the HLB value ranges from 12 to 15).

< nonionic surfactant (ii)>

a nonionic surfactant represented by the following general formula (ii), having an HLB value of from 7 to 10, and a content of a compound where $n = 0$ of 4% by weight or less, with an addition mol number of the compound of the greatest content n_{max} satisfying the following formula (A):



(wherein R_4 represents a linear or branched alkyl or alkenyl group of from 8 to 18 carbon atoms in average or an alkylphenyl group of from 12 to 22 carbon atoms in total, R_5 represents hydrogen or a methyl group, n is an addition mol number of ethylene oxide added so that the HLB value ranges from 7 to 10).

$$\sum_{i=n_{\max}-2}^{i=n_{\max}+2} Y_i \geq 60\% \dots (A)$$

2. A liquid detergent composition as defined in claim 1, wherein from 0.1 to 10 parts by weight of a polycarboxylic acid type oligomer which has an average molecular weight of from 500 to 100,000 and a portion of which may be in the form of a salt is blended based on 100 parts by weight of the surfactant (b).

3. A liquid detergent composition as defined in claim 1 or 2, which contains water as a main medium, and has a pH of from 6 to 8.

-2- (WPAT)

AN - 98-213130/19

XRAM- C98-067629

TI - Liquid cleaner compsn. - contains an amine-modified silicone deriv.

DC - A97 D25

PA - (KAOS) KAO CORP

PR - 96.08.20 96JP-218855

NUM - 1 patent(s) 1 country(s)

PN -- JP10060480 A 98.03.03 * (9819) 10p C11D-003/37

AP -- 96JP-218855 96.08.20

IC1 - C11D-003/37

IC2 - C11D-010/02 C11D-017/08

ICL - C11D-001:72 C11D-001:722 C11D-003:20 C11D-003:37 C11D-010/02

AB - JP10060480 A

The compsn. contains (a) 0.05-5 wt. % an amine-modified silicone deriv. of formula (I), (b) 5-75 wt. % a mixt. of (i) 95-75 wt. % (8-18C alkyl-, alkenyl- or 12-22C alkylphenyl)-poly(oxy-2-4C alkylene) or its methyl- or ethyl-ether with a HLB value of 12-15 and (ii) 5-15 wt. % a similar poly(oxyethylene) or methyl- or ethyl-ether with a HLB value of 7-10, contg. 4 wt. % or less of monomeric ethers and 60 wt. % or more of polyethers within plus or minus 2 of the max. distribution of mol. addition of ethyleneoxide, where the wt. ratio of (a)/(b) of 1/100 - 1/5. $l = 100-600$; $l/m = 100/1-10/1$; $m/n = 1/10 - 10/1$; $R = 1-4C$ alkyl, OH or alkoxy; $R_2 = 1-4C$ alkyl; $A = 1-18C$

alkyl-poly(oxypropylene-oxyethylene)oxy-polymethylenecarboxy-(H or 1-4C alkyl)amido-polymethylene- with/or without (H or 1-4C alkyl)amino-polymethylene-; $B = 1-4C$ alkyl or 1-10C alkyl-poly(oxypropylene-oxyethylene)oxy-polymethylene-. Also claimed is an aq. soln. of the compsn. with pH of 6-8.

USE - The cleaner for wool, acrylic fibres, polyesters or their mixed fabrics.

ADVANTAGE - The compsn. shows the improved storage stability and gives fabrics the prevention of shrinkage, the good penetration of detergent soln. and the improved finish feeling.

(Dwg.0/0)

FN - WPI4KGA1.GIF

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **09056973 A**

(43) Date of publication of application: **04.03.97**

(51) Int. Cl.

D06F 35/00

(21) Application number: **07214636**

(71) Applicant: **FUJIE:KK**

(22) Date of filing: **23.08.95**

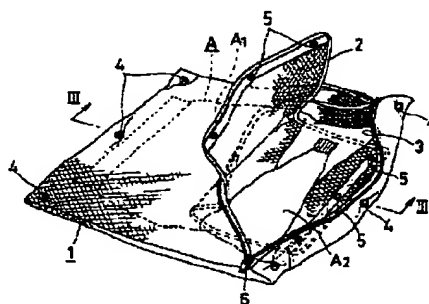
(72) Inventor: **FUJIE HIDEKI**

(54) NET BAG FOR WASHING SWEATER

(57) Abstract

PROBLEM TO BE SOLVED: To provide a washing net bag special for t sweater used at the time of washing sweater with a washing machine, which is good in the damage preventing effect and shape retention effect for sweater and also can be used as it is for drying.

SOLUTION: A belt-like sleeve holder 2 is disposed with only one end thereof sewn in a flat net bag main body 1 capable of storing the body part A1 of a sweater A in spread state, the sleeve part A2 of the sweater A stored in the net bag main body 1 is interposed inside two-folded sleeve holder 2 and held in a locking state, thereby preventing shifting of the sweater in the bag main body.



COPYRIGHT: (C)1997,JPO